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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,442	09/11/2006	Jean Pierre Gayral	GENOM.061NP	3808

20995 7590 05/07/2008

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EXAMINER	
WILDER, CYNTHIA B	

ART UNIT	PAPER NUMBER
1637	

NOTIFICATION DATE	DELIVERY MODE
05/07/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/538,442	GAYRAL ET AL.	
	Examiner	Art Unit	
	CYNTHIA B. WILDER	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *1-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/22/2008 has been entered. Claims 15, 16, 18-19, 21-24, 26-28, 31-32, 39-40, 42-43 have been amended. Claims 1-46 are pending. Claims 1-14 are withdrawn from consideration as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims15-18, 23-29, 32-34 and 39-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Berg et al (WO 02/18635, March 2002). Regarding claims 15 and 32, Berg et al teach a method for verifying the efficiency of sample preparation of test sample nucleic acids and the performance of nucleic acid amplification and detection practiced on a test sample after its preparation, said method comprising: providing a an internal control reagent comprising non-viable

viral particles, said internal control reagent having at least one internal control (IC) nucleic acid sequence therein, wherein said internal control reagent is an internal control for the release, amplification and detection of a nucleic acid from said test sample; (ii) adding said internal control reagent into said test sample; (iii) submitting said test sample with said added internal control reagent to a sample preparation procedure in order to release, both said nucleic acid from said test sample and said IC nucleic acid target sequence from said internal control reagent added reagent ; and (iv) submitting a product from said sample preparation procedure to amplification and detection for the amplification and detection of both said IC nucleic acid target sequence and said nucleic acid of the test sample nucleic acids, wherein detection of said IC nucleic acid target sequence is indicative of both efficient sample preparation and performance of nucleic acid amplification (page 4-9, lines 1-19; lines 10, lines 6-21 and 31-37). Berg et al teach that the non-viable particles include those which are capable of being propagated, e.g., virus particles or other pathogenic organisms, but which have been altered in such a way that replication and/or propagation of the particles are no longer possible. Berg et al additionally teach that another important feature of the "non-viable particles" which encapsulate, entrap, or embed the IC nucleic acid is that the structure of the particles will lyse, collapse, leak, i.e., generally be disrupted, under the same conditions which will "disrupt" the target entity e.g., cells or viruses which contain the target nucleic acid which is being analyzed (see pages 18 and 19). Berg et al teach that the sample may be derived from cultured cells, bacteria or viral particles *(in vitro* source) or from

human, plant or animal sources (*in vivo* sources) (page 31). Berg et al further teach that the target nucleic acid include cells, derived from multicellular organism or unicellular organisms as well as viruses and bacteriophages (page 19, lines 33-36).

Regarding claims 16, Berg et al teach further comprising (v) comparing the amplification and/or detection performed in iv) to the amplification and detection performed with a control reaction to evaluate the efficiency of the sample preparation and the performance of the nucleic acid amplification and detection practiced on said test sample and reagent (page 37, lines 10-29).

Regarding claims 17 and 33, Berg et al teach wherein said sample preparation procedure comprises purifying cells and non-viable viral particles prior to lysis (page 35, lines 1-3).

Regarding claims 18 and 34, Berg et al teach wherein said cells are selected from bacteria (see Examples at pages 41-50, e.g., Example 2 which teaches *Chlamydia trachomatis).*

Regarding claims 23-24 and 39-40, Berg et al teach wherein said IC target nucleic acid target sequence is on such as a plasmid (page 4, lines 3-4).

Regarding claims 25 and 41, Berg et al teach wherein said nucleic acid amplification method is PCR (page 8, line 35 to page 9, line 1-4).

Regarding claims 26 and 42, Berg et al teach wherein said IC target nucleic acid target sequence is nucleic acid sequence of clinical, environmental, alimentary or human origin (page 31, lines 31-37 to page 32, lines 1-16).

Regarding claims 27 and 43, Berg et al teach wherein said IC target nucleic acid target sequence is a nucleic acid sequence of microbial origin (see Examples).

Regarding claims 28-29 and 44-45, Berg et al teach wherein the said test sample is a sample of clinical origin and wherein said test sample comprises a vaginal swab (see page Examples and see also pages 31 and 32). Therefore, Berg et al meet the limitations of the claims recited above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 19-21, 31, 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berg et al as previously applied above in view of Ke et al (citation made of record in prior Office action) and Kruske et al (citation made of record in the prior Office action).

Berg et al teach a teach a method for verifying the efficiency of sample preparations of test sample nucleic acids by providing an internal control reagent, adding the internal control reagent into said test sample, submitting said test sample with said added internal control reagent to a sample preparation procedure in order to release both said nucleic acid from said test sample and said IC nucleic acid target sequence from said internal control reagent and submitting a product from said sample preparation procedure to amplification and detection of both said IC nucleic acid and target sequence. Berg et al additionally teach wherein said internal control reagent comprises cells from a bacterial origin.

With regards to claims 19-21, 31 and 35-38, Berg et al do not teach wherein said cells are *E. coli* cells or *Bacillus globigii* spores. However, the desired selection of cells for use in the method is based on conventional nucleic acid manipulation of reagents and methodologies, as well as well as routine optimization of reaction components, concentrations, and parameters. Clearly such conventional and trivial modification and optimizations do not contribute towards patentability. For example, Ke et al teach a method of providing an internal control reagent for verification of reaction conditions, wherein said internal control reagent comprises cells derived from *E. coli (*page 325, col. 2,

"construction of the internal control" and Table 1). Ke also teaches wherein the internal control reagent comprises cells derived from bacterial spores such as *bacillus anthracis* (Table 1). Kruske et al teach a method similar to that of Ke et al wherein an internal control reagent is provided, said internal control reagent comprises cells derived from *Bacillus globigii* endospores, said cells isolated from an environmental sample (page 2463 and 2471). Thus, one of ordinary skill in the art would have been motivated to modify the primary references in the manner of the claims to achieve the expected benefits, optimizations an/or expanded applications. It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to carry out the claimed methods using different cell types isolated from different sources.

7. Claims 30 and 46 rejected under 35 U.S.C. 103(a) as being unpatentable over Berg et al s previously applied above in view of Picard et al and Bergeron (citation made of record in prior office action). Regarding claims 30 and 46, Berg et al teach a teach a method for verifying the efficiency of sample preparations of test sample nucleic acids by providing an internal control reagent, adding the internal control reagent into said test sample, submitting said test sample with said added internal control reagent to a sample preparation procedure in order to release both said nucleic acid from said test sample and said IC nucleic acid target sequence from said internal control reagent and submitting a product from said sample preparation procedure to amplification and detection of both said IC nucleic acid and target sequence. Berg et al additionally teach wherein said internal control reagent comprises cells from a bacterial origin.

Berg et al do not teach wherein the sample preparation procedure comprises steps of nucleic acid extraction and elimination, neutralization and inactivation of nucleic acid testing (NAT) inhibitors.

Picard et al and Bergeron teach a method comprising providing a reagent comprising a cell comprising bacterial cells comprising at least one nucleic acid sequence serving as an internal control target sample preparation; adding said internal control into said test sample, submitting a released, nucleic acid to amplification or detection and further comparing the amplification and/or detection with control reactions to evaluate the efficiency of the preparation (see section 2.2 and 2.5-2.5.3.).

Picard and Bergeron further teach wherein the sample preparation comprises concentrating and purifying cells or viral particles, lysis of cells, nucleic acid extraction, inactivation, elimination or neutralization of NAT inhibitors and nucleic acid concentration or purification (see section 2.2. and 2.5 to 2.5.2). Picard and Bergeron teach that the above steps provide optimum results in sample preparation versus prior methods for preparing a nucleic acid sample from a microbial cell (section 2.2). Picard and Bergeron teaches that internal controls are important and that they are integrated into the NAT assay to verify the efficiency of each amplification and/or detection reaction (see 2.5.2 and section 3, "Conclusion and perspectives").

One of ordinary skill in the art at the time of the claimed invention would have been motivated to incorporate steps of preparing a sample as taught by Picard and Bergeron wherein a NAT assay is used for verifying the efficiency of

an amplification and/or detection reaction as taught by Berg et al for the benefit of obtaining optimum results when preparing a nucleic acid sample from a microbial cell a suggested by Picard and Bergeron. The instant invention is prima facie obvious over the combined teachings of Berg et al in view of Picard and Bergeron.

Conclusion

8. No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA B. WILDER whose telephone number is (571)272-0791. The examiner can normally be reached on a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cynthia B. Wilder/
Patent Examiner
Art Unit 1637

5/4/2008